Claims

[c1] A circuit comprising:
an enhanced driver that provides a first voltage; and
a detector coupled to the enhanced driver, wherein the detector monitors the first voltage, and wherein if the first voltage falls below a predetermined value, the enhanced driver increases the first voltage to at least an optimal voltage.

[c2] The circuit of claim 1 wherein the enhanced driver comprises:
a word line driver; and
a programmable bootstrap circuit coupled to the word line driver and to the detector, wherein if the first voltage falls below the predetermined value, the programmable bootstrap circuit increases the first voltage to at least an optimal voltage.

[c3] The circuit of claim 2 wherein the optimal voltage is at least the minimum operating voltage.

[c4] The circuit of claim 2 wherein the optimal voltage is the original first voltage.

[c5] The circuit of claim 2 wherein the optimal voltage is greater than the original first voltage.

[c6] The circuit of claim 1 wherein the enhanced driver is an enhanced word line driver.

[c7] The circuit of claim 1 further comprising a decoder coupled to the enhanced driver.

[c8] The circuit of claim 1 wherein an override signal can be applied so that the optimal voltage overrides the first voltage as long as the override signal is applied.

[c9]

A circuit comprising:
a driver that provides a first voltage;
a detector coupled to the driver, wherein the detector monitors the first voltage; and

a programmable bootstrap circuit coupled to the driver and to the detector, wherein if the first voltage falls below the predetermined value, the programmable bootstrap circuit increases the first voltage to an optimal voltage.

[c10] The circuit of claim 9 wherein the optimal voltage is at least the minimum operating voltage.

[c11] The circuit of claim 9 wherein the optimal voltage is the original first voltage.

[c12] The circuit of claim 9 wherein the optimal voltage is greater than the original first voltage.

[c13] The circuit of claim 9 wherein the enhanced driver is an enhanced word line driver.

[c14] The circuit of claim 9 further comprising a decoder coupled to the enhanced driver.

[c15] The circuit of claim 9 wherein an override signal can be applied so that the optimal voltage overrides the first voltage as long as the override signal is applied.

[c16] A system for a bootstrap circuit, the system comprising:
a first voltage supply that provides a first voltage to the circuit; and
a second voltage supply that provides a second voltage to the circuit if the first voltage drops below a predetermined value.

[c17] A circuit comprising:
a word line driver that provides a first voltage;
a detector coupled to the word line driver, wherein the detector monitors the first voltage; and
a programmable bootstrap circuit coupled to the driver and to the detector, wherein if the first voltage falls below a predetermined value, the programmable bootstrap circuit increases the first voltage to at least the predetermined value, and wherein an override signal can be applied so that a second voltage overrides the first voltage as long as the override signal is applied.

[c18] A method for providing a bootstrap circuit, the method comprising the steps of:
(a) detecting a first voltage; and
(b) providing a second voltage to the drive the circuit if the first voltage falls below a predetermined value.

[c19] The method of claim 18 wherein the second voltage is dependent on the first voltage.